May 7, 2018

Marlene H. Dortch
Secretary
Federal Communications Commission
455 12th St. SW
Washington DC 20554

RE: **EX PARTE** in Inquiry Concerning 911 Access, Routing, and Location in Enterprise Communications Systems, PS Docket No. 17-239

Dear Ms. Dortch:

On May 3, 2018, Mary Brown, James Stormes and Dan Keller of Cisco Systems, Inc., together with Patrick Halley of Wilkinson, Barker Knauer LLP, representing Cisco, met telephonically with the following staff from the Public Safety Bureau on the above-captioned docket: David Furth, Rasoul Safavian, Erika Olsen, Michael Wilhelm, John Evanoff, Michael Connelly, Austin Randazzo, Brenda Boykin, and Nelly Foosaner. The purpose of the meeting was to review staff questions concerning the Cisco Emergency Responder (CER) solution, and to discuss Cisco's views on location and call back capabilities of multiline telephone systems (MLTS).

Cisco explained the dynamic location updates available with CER, the requirement that MLTS operators map the location of on-premises network ports (wired) or access points (wireless), and that the MLTS operator controls the precision of the location information, with capability for building, floor, and cube or room numbers available to the MLTS operator. In addition, the MLTS operator is responsible for exporting, formatting and importing the Automatic Location Information (ALI) information into their local Public Safety Answering Point (PSAP) ALI database, including subsequent changes in their building maps. CER can format the ALI exported data specifically for: Bell-Canada, SBC-Ameritech, SBC-Pacbell, SBC-Southwestern-Bell, Qwest and Verizon. CER supports generic formatting for use with other service providers.

Call back capability is also supported by CER, for phones that are associated with Direct Inward Dialing (DID) capability and those that are not. In any case, the solution requires the MLTS operator to provision as Emergency Location Identification Numbers (ELIN) DIDs from its local exchange carrier.

Staff also requested certain solution documentation on CER. That information is available here:

Network Deployment Architecture:
https://supportforums.cisco.com/t5/collaboration-voice-and-video/cisco-emergency-responder-cer-explained/ta-p/3138289
Solutions Reference Network Design:
https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/srnd/collab11/collab11/e911.html

In addition, Cisco referenced the following standards it supports:

- Interfaces (PSTN/3rd Party): SIP, PRI, CAMA, FXO, T1-CAS
- Generic Data Formats (for ALI Records): NENA 2.0, 2.1 and 3.0

Cisco explained that most MLTS vendors will utilize proprietary call control for traffic within the enterprise. We noted the existence of the "HELD" protocol promulgated by the Internet Engineering Task Force (IETF) that would facilitate location capability, but noted that this protocol is not yet widely adopted.

More generally, Cisco represented that generating a dispatchable location is not uniform over MLTS systems, with dispatchable location more supportable from wired MLTS, more difficult for wireless, and difficult to impossible for off premises softphones using public Internet or Virtual Private Network (VPN) connections. Cisco stated that while employees can update location when using a softphone, there is a trade-off between prompting such updates and user fatigue. For on-premises use of softphones, third party vendors have the capability to update client location, and the CER is designed to facilitate these third party solutions, which can look at changes in network activity such as changes to SSID or IP address.

Respectfully submitted,

CISCO SYSTEMS, INC.

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